

REMARKS/ARGUMENTS

These submissions are filed in response to the Office Action of September 19, 2006. Claims 1, 6, 11, 14, and 17 have been amended to expedite the allowance of the application and for no other reason. The remainder of the claims are unchanged. No admission or representation is made by the present amendments and argument other than that explicitly provided herein.

The Examiner now rejects claims 1, 3, 4-5, 11, 14-15, 17 and 18 under 35 U.S.C. 103(a) as being obvious having regard to Isaacs (U.S. Patent No. 5,894,308) in view of Williams et al. (US Patent Publication No. 2002/0158880), and further in view of Probets (Document Engineering Lab, <http://www.eprg.org/research/SVG/flash2svg/>). The Examiner also rejects claims 6-10 and 16 under 35 U.S.C. 103(a) as being obvious over Isaacs, in view of Williams et al., Probets and Noyle (U.S. Patent No. 6,874,150).

The Applicant thanks the Examiner for his detailed consideration of the Applicant's first reply. In the Examiner's Response to the Applicant's previous argument, the Examiner states at page 15, paragraphs 96(b), (d) and (e), that the Applicant's previous reply relied on features which were not part of the claims and could therefore not be considered. The present amendments to the claims add the features previously noted by the Applicant to the pending claims. In particular, the amended claims are now explicitly directed to a method, system and computer software product for **automated graphics conversion of graphic object data defining a graphic object for efficient delivery to wireless devices connected to a wireless communications network**, and include the limitation of **transmitting the converted graphic object to a wireless device over the wireless communications network for display thereon**. The claims are believed to be allowable for the reasons set forth below.

As previously submitted, there is no suggestion or motivation in the references themselves or in the knowledge generally available to one of ordinary skill in the art, which would lead one of ordinary skill in the art to combine and/or modify the

references as suggested by the Examiner. In addition, the prior art references fail to teach or suggest all the claim limitations found in the independent claims of the present application.

The claimed subject matter is concerned with converting edge record based graphics to polygon based graphics for more efficient delivery to mobile devices over a wireless network. In one embodiment, this allows users of wireless mobile devices to view flash files, in either animated or unanimated converted formats. The method disclosed by the claimed subject matter saves bandwidth and requires less processing power from the mobile device in order to view the graphics.

In contrast, the Isaacs reference discloses a method for interactively adjusting the number of polygons in a 3D graphic object by receiving interactive input from a user through a user interface. The method disclosed by Isaacs reduces the polygon count in 3D object models, and as a result the quality of the image, based on a desired level of detail. The method disclosed by Isaacs is intended to be used by graphics designers in an authoring environment, such as Silicon Graphics WebSpace Author, when designing 3D images. Isaacs is not concerned with or related to the automated conversion of graphic for delivering to mobile devices.

Isaacs teaches a polygon reduction algorithm that chooses polygons for removal based on edge length. Isaacs employs this edge length based algorithm on 3D objects because the method of Isaacs results in a reduced level of detail in the 3D object and removal of smaller polygons is expected to be less visible in 3D objects viewed from a distance as opposed to the removal of larger polygons. In contrast, the claimed invention does not reduce the quality of 3D objects. Thus, Isaacs is directed to a different problem than the claimed invention.

Isaacs does not mention the application to mobile devices, or the transmission of converted graphics to mobile devices over a wireless network as in the amended claims. Thus, Isaacs fails to teach or suggest all of the features of the independent claims. Furthermore, Isaacs provides no motivation to apply the teachings of Isaacs (i.e., an

interactive method) to the subject area of the claimed subject matter. Isaacs nowhere suggests the adoption of his interactive technique to the field of the claimed subject matter, namely automated graphics conversion for efficient delivery to mobile devices. Accordingly, the Isaacs reference constitutes non-analogous art and is not a proper reference for citation under 35 U.S.C. § 103(a).

The Examiner attempts to cure the deficiencies of Isaacs with reference to Williams. Again, there is no motivation to combine these references. The Examiner previously stated that the motivation to combine Williams with Isaacs is to allow a more realistic rendering of a 3D object. The Examiner states at paragraph 96(c) of the Office Action of September 19, 2006 that developers looking for balance in rendering time/efficiency and detail would apply the texture/color teachings of Williams to the efficient rendering techniques of Isaacs to provide a more realistic representation of a 3D object while achieving faster rendering time. The Applicant respectfully submits that it is only with hindsight that such a motivation can be found. As previously noted, the problems addressed by Isaacs and Williams are completely contrary to each other, neither of which is related the problem addressed by the claimed invention, namely the efficient delivery of graphics to mobile devices over a wireless network.

Isaacs is concerned with providing a reduced level of detail in the 3D object through the removal of smaller polygons expected to be less visible in 3D objects viewed from a distance. Williams is concerned with modelling 3D objects using texture maps and geometric models, beginning with colored scan data generated using conventional techniques for scanning physical objects (see, for example, Paragraph 0009, Summary). As such, Williams concerns the conversion of highly accurate source data into low complexity geometric models and compensates for the loss of detail caused by the low complexity geometric models through the use of texture maps. This approach runs completely contrary to the teachings of Isaacs, where a lower level of detail resulting from a reduced polygon count is expected and accepted, and no attempt is made to compensate for the lower level of detail through the use of texture maps. In fact, Isaacs no where teaches or suggests the use of texture maps. The introduction of texture maps into the teachings of Isaacs would not sufficiently lower

the rendering time of an image, which is the objective that Isaacs seeks to achieve (see, for example, Background section). Therefore, it is submitted that Williams explicitly teaches away from the subject matter disclosed by Isaacs. Accordingly, in the Applicant's respectful submission, the Williams reference constitutes non-analogous art to the Isaacs reference and the combination is not proper for citation under 35 U.S.C. § 103(a).

Thus, it is only with hindsight that Issacs and Williams can be combined. A person skilled in the art looking to solve problems in displaying graphics such as flash files on mobile devices having limited bandwidth and/or processing power would not look to Isaacs or Williams, let alone combine these references given the differences between them. Furthermore, given the differences between these references, the adaptation of the teachings of Isaacs with that of Williams requires many technical adaptations and is not a mere combination as appears to be suggested by the Examiner. The Examiner seeks to select elements from the disclosure of Isaacs and Williams and combine them to arrive at a combination of select features of the claimed invention. It is respectfully submitted that hindsight is required to arrive at this combination, and furthermore that such a combination would not be made by a person of skill in the art without the exercise of inventive skill. Furthermore, this combination still does not describe each and every feature recited in independent claims 1, 11, 14 and 17.

The Examiner further cites the Probets reference in an attempt to find support for yet another aspect of the presently claimed subject matter, namely the 3D object being in edge record format. Probets is an engineering document describing various approaches for conversion between SWF and SVG file formats. As with Isaacs and Williams, the Probets reference provides no motivation to apply the teachings of Probets to the subject area of the presently claimed subject matter. Probets nowhere suggests the adoption of his technique to the field of the presently claimed subject matter, namely automated graphics conversion for efficient delivery to mobile devices. Further, Probets fails to teach or suggest converting the graphic object data from the path format to a second format, the path format including path elements that are each

associated with a fill style and define one or more polygon shapes at least partially filled with the associated fill style, the path elements collectively defining the graphic object. Probets further fails to teach or suggest the conversion including the steps of redefining the polygon shapes defined by the path elements as groups of triangles; and combining at least some of triangles in the groups of triangles into further polygon shapes that fall within predetermined complexity thresholds.

Even if Isaacs and Williams and Probets are combined in the manner suggested by the Examiner, the combination still does not disclose the automated graphics conversion of graphic object data defining a graphic object for efficient delivery to wireless devices connected to a wireless communications network, or the limitation of transmitting the converted graphic object to a wireless device over the wireless communications network for display thereon as in amended independent claims 1, 11, 14 and 17.

Therefore, it is submitted that claims 1, 11, 14, and 17 are patentable over Isaacs and Williams and Probets because none of Isaacs and Williams and Probets, whether taken alone or in combination, teach or suggest each and every feature recited in claim 1 according to the method recited by claim 1. Claims 3-10 and 16 depend, either directly or indirectly, from claim 1, 11, 14 or 17 and are patentable for at least the same reason.

In the Applicant's respectful submission, none of the cited references recognizes the problem addressed by the present application; namely, the unfeasibility of playing graphic such as flash files on mobile devices having limited bandwidth and/or processing power. Accordingly, one of ordinary skill in the art would not be motivated to combine and modify the references as suggested by the Examiner. Additionally, the Isaacs and Williams references provide teachings that teach away from each other and are not proper references for citation under 35 U.S.C. § 103(a). In the Applicant's respectful submission, one of ordinary skill in the art addressing the issue of displaying graphics on mobile devices with limited bandwidth would not be inclined to modify the teachings of Isaacs in the manner suggested by the Examiner in view of Williams and

Probets.

In view of the foregoing remarks and submissions, the Applicant respectfully requests reconsideration and submits that the present application is in condition for allowance. Should the Examiner have any questions in connection with the Applicant's submissions, please contact the undersigned.

Respectfully Submitted,
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